CLAIMS

What is claimed is:

1.   A method of referencing a host computing system in a storage area network
comprising:

identifying a machine name assigned to the host computing system in a managed
information environment, the machine name corresponding to a network identity of the
host computing system;

receiving, from an agent, an virtual name indicative of the host computing system,
the virtual name corresponding to an application identity of the host computing system;
and

executing an agent management application operable to reference the host
computing system by employing the machine name for network references to the host
computing system and further operable to employ the virtual name for application
references to the host computing system, the machine name and the virtual name
simultaneously referring to the host computing system.

2.   The method of claim 1 wherein the virtual name is operable to distinguish the host
computing system from the virtual names corresponding to other computing systems in
the storage area network.

3.   The method of claim 1 further comprising defining, at the host, the virtual name
in a virtual name repository, the management application operable to receive the virtual
name of the host from the virtual name repository.

4.   The method of claim 1 wherein the host computing system is a first host and
further comprising a second host, the second host operable as a failover computing
system complementing the first host, the second host operable for interchangeable
performance with manageable entities in the storage area network.

5.   The method of claim 4 where the first host and second host are a failover pair operable for substitute engagement in the storage area network, the virtual name of the first and second host operable for dynamic naming independently of the machine name of the first and second host.

5

6.   The method of claim 4 wherein the first host is in active communication with at least one manageable entity for managing the manageable entity, the manageable entities responsive to the first host via the active communication, further comprising:

      deactivating the active communication between the first host and the manageable

10   entities;

      designating the second host as managing the at least one manageable entity; and

      restarting the at least one manageable entity to establish active communication between the second host and the manageable entities, the active communication providing responsiveness of the manageable entities to the second host.

15

7.   The method of claim 6 wherein designating further comprises:

      enumerating the at least one manageable entity as responsive to the second host; and

      restarting the at least one manageable entity to effect the change in

20   responsiveness.

8.   The method of claim 4 further comprising:

      coupling the first host and the second host via a failover link, the failover link operable to synchronize the first host and the second host; and

25   performing similar data manipulation operations via the first host and the second host, the similar data manipulations operable to enable operation as a failover pair.

9.   The method of claim 4 further comprising:

      identifying an operational condition at the first host, the operational condition

30   indicative of an inability of the first host to manage the manageable entities;

modifying the virtual name of the second host indicative of failover operation from the first host; and

directing the management application to employ the second host as emulating the first host.

5

10.   The method of claim 4 further comprising:

establishing a failover link between the first host and the second host;

synchronizing the first and second host, synchronization providing performance of similar data manipulation operations at the first host and the second host;

10   employing the second host for performing an independent computing operation from the first host;

detecting an operational anomaly in the first host;

modifying the virtual name of the second host to correspond to the failover operation in substitution of the first host; and

15   switching the data access manipulations from the storage area network from the first host to the second host, switching allowing the second host to operate in a failover mode similarly to the first host.

11.   The method of claim 10 further comprising maintaining the synchronizing during

20   the execution of the independent computing operation.

12.   The method of claim 10 further comprising maintaining the network name of the second host during the modification of the virtual name from the independent computing application to the failover mode.

25

13.   The method of claim 4 wherein the first and second hosts are operable to perform interchangeably with other managed entities in the managed information network.

14.   A method of identifying managed entities in a storage area network comprising:

30   identifying a first managed entity having a first machine name and a second managed entity having a second machine name, each of the first and second manageable

entities operable to control a plurality of other manageable entities, the first and second

managed entities adapted to perform similar operations;

designating a first virtual name for the first managed entity and a second virtual name for

the second managed entity;

5   employing a management application, the first and second manageable entities

responsive to the management application, the management application operable to

identify the first and second manageable entities by the virtual name; and

selectively employing one of either the first and second machine names or the

first and second virtual names for referring to the respective first and second managed

10   entities, the machine name corresponding to network location references and the virtual

names corresponding to managed entity references, the first machine name and first

virtual name simultaneously referring to the first managed entity and the second machine

name and second virtual name simultaneously referring to the second managed entity.

15   15.   The method of claim 14 wherein selectively employing further comprises:

identifying one of either the first and second manageable entities as a primary host

operable for controlling a predetermined set of other manageable entities;

receiving an indication of inability of the primary host being unable to control the

predetermined set of other manageable entities;

20   switching, by interchanging the respective virtual names of the first and second

manageable entities, the designation of the primary host from the identified one of either

the first and second manageable entities to the other of the first and second manageable

entities

25   16.   A storage area network management device for referencing a host computing

system in a storage area network comprising:

a processor operable to execute a sequence of instructions included in a

management application;

a memory operable for storing the sequence of the instructions, input data, and

30   results of executing the sequence of instructions; and

an interface to a storage area network; the management device further operable to

identify a machine name assigned to the host computing system in a managed information environment, the machine name corresponding to a network identity of the host computing system;

receive, via the interface from an agent, an virtual name indicative of the host computing system, the virtual name corresponding to an application identity of the host computing system; and

execute, via the processor, the management application to reference the host computing system, the management application operable to employ the machine name for network references to the host computing system and further operable to employ the virtual name for application references to the host computing system, the machine name and the virtual name simultaneously referring to the host computing system.

17.   The storage area network management device of claim 16 wherein the virtual name is operable to distinguish the host computing system from the virtual names corresponding to other computing systems in the storage area network.

18.   The storage area network management device of claim 16 wherein the management application is further operable to define, at the host, the virtual name in a virtual name repository, the management application operable to receive the virtual name of the host from the virtual name repository.

19.   The storage area network management device of claim 16 wherein the host computing system is a first host and further comprising a second host, the second host operable as a failover computing system complementing the first host, the second host operable for interchangeable performance with manageable entities in the storage area network.

20.   The storage area network management device of claim 19 where the first host and second host are a failover pair operable for substitute engagement in the storage area

network, the virtual name of the first and second host operable for dynamic naming independently of the machine name of the first and second host.

21.   The storage area network management device of claim 19 wherein the first host is

5   in active communication with at least one manageable entity via the interface for managing the manageable entity, the manageable entities responsive to the first host via the active communication, the management application operable to:

   deactivate the active communication between the first host and the manageable entities;

10   designate, via the interface, the second host as managing the at least one manageable entity; and

   restart the at least one manageable entity to establish active communication between the second host and the manageable entities, the active communication providing responsiveness of the manageable entities to the second host.

15

22.   The storage area network management device of claim 21 wherein the management application is further operable to:

   enumerate, in the memory, the at least one manageable entity as responsive to the second host; and

20   restart, via the interface. the at least one manageable entity to effect the change in responsiveness.

23.   The storage area network management device of claim 19 wherein the interface is further operable to:

25   couple the first host and the second host via a failover link, the failover link operable to synchronize the first host and the second host; and

   perform similar data manipulation operations via the first host and the second host, the similar data manipulations operable to enable operation as a failover pair.

30   24.   The storage area network management device of claim 19 wherein the management application is further operable to:

identify an operational condition at the first host, the operational condition indicative of an inability of the first host to manage the manageable entities;

modify the virtual name of the second host indicative of failover operation from the first host; and

5   direct the management application to employ the second host as emulating the first host.

25.   The storage area network management device of claim 19 wherein the management application is further operable to:

10   establish a failover link between the first host and the second host;

synchronize the first and second host, synchronization providing performance of similar data manipulation operations at the first host and the second host;

employing the second host for performing an independent computing operation from the first host;

15   detect an operational anomaly in the first host;

modify the virtual name of the second host to correspond to the failover operation in substitution of the first host; and

switch the data access manipulations from the storage area network from the first host to the second host, switching allowing the second host to operate in a failover mode

20   similarly to the first host.

26.   The storage area network management device of claim 19 wherein the first and second hosts are operable to perform interchangeably with other managed entities in the managed information network.

25

27.   The method of claim 3 wherein the virtual name repository is included in an external configuration device, the external configuration device operable as a standalone resource corresponding to the host computing system and further operable to store agents for activation on the host computing system.

30

28.   The method of claim 4 wherein the first and second hosts are in each in communication with a respective first external configuration device and second external configuration device, the external configuration devices operable to install the agents corresponding to each of the first and second hosts, and the first and second external

5   configuration devices further coupled via a failover link operable to allow operation as a failover computing system.

29.   The method of claim 4 wherein the first and second hosts are in each in communication with an external configuration device operable to install the agents

10   corresponding to each of the first and second hosts, either of the first and second hosts operable to install agents and perform operation according to the virtual name from the external configuration device.

30.   The method of claim 27 wherein the host computing system is operable according

15   to at least one of a virtual name from a corresponding dedicated external configuration device, a virtual name from one of either a first external configuration device and a second external configuration device, the first and second external configuration devices operable for failover operation via a failover link, and a virtual name from a shared external configuration device, the shared external configuration device operable to

20   provide a virtual name to at least one alternate host computing system.

31.   A computer program product having a computer readable medium operable to store computer program logic embodied in computer program code encoded thereon for of referencing a host computing system in a storage area network comprising:

25   computer program code for identifying a machine name assigned to the host computing system in a managed information environment, the machine name corresponding to a network identity of the host computing system;

             computer program code for receiving, from an agent, an virtual name indicative of the host computing system, the virtual name corresponding to an application identity of

30   the host computing system; and

computer program code for executing an agent management application operable to reference the host computing system by employing the machine name for network references to the host computing system and further operable to employ the virtual name for application references to the host computing system, the machine name and the virtual

5   name simultaneously referring to the host computing system.

32.   A computer data signal for of referencing a host computing system in a storage area network comprising:

program code for identifying a machine name assigned to the host computing

10   system in a managed information environment, the machine name corresponding to a network identity of the host computing system;

program code for receiving, from an agent, an virtual name indicative of the host computing system, the virtual name corresponding to an application identity of the host computing system; and

15   program code for executing an agent management application operable to reference the host computing system by employing the machine name for network references to the host computing system and further operable to employ the virtual name for application references to the host computing system, the machine name and the virtual name simultaneously referring to the host computing system.

20

33.   A management server for managing a host computing system in a storage area network comprising:

means for identifying a machine name assigned to the host computing system in a managed information environment, the machine name corresponding to a network

25   identity of the host computing system;

means for receiving, from an agent, an virtual name indicative of the host computing system, the virtual name corresponding to an application identity of the host computing system; and

30

means for executing an agent management application operable to reference the host computing system by employing the machine name for network references to the host computing system and further operable to employ the virtual name for application references to the host computing system, the machine name and the virtual name

5   simultaneously referring to the host computing system.

manageable entity.

10